

BARG Newsletter November 2024



Ballarat Amateur Radio Group Inc. #6953T

November 2024 Monthly Newsletter

Next General Meeting BARG inc
11:00am, Saturday 30th November 2024
At the Airport - All Welcome

Contacting us

BARG@BARG.ORG.AU

We're on the web.

www.barg.org.au

https://twitter.com/vk3_barg

<https://www.facebook.com/groups/VK3BML/>

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Times and dates of nets as below

Club Nets: VHF NET: Every Tuesday Night at 8 pm on 146.750 MHz - VK3RBA

HF NET: Every Thursday Night at 8 pm on 3.608 MHz - VK3BML

6m NET: Every Tuesday Night at 8:30 pm on 53.650Mhz RX / 52.650Mhz TX - FM
with a 91.5 tone - VK3RWU

LINKED REPEATERS: *The local VK3RBA-70cm repeater on Mt Buninyong is part of a network of linked repeaters covering North-Western Victoria.*

Access details for this repeater have recently changed.

For full details of this linked network and access details

see <https://www.qrz.com/lookup/vk3rba>

You can listen to the system live <http://vk3rba.dyndns.org:441/>

This linked system may be accessed via IRLP node 9503



President's Report November 2024



Another short one, as I have COVID and are still not quite there yet.

The Bunnings BBQ fundraiser for the club was on the 9th of November. Total raised was \$1653.11 once expenses had been taken out. Thank you to all who offered to help.

Christmas breakup Back to BARG is on Friday the 13th of December, this is a members and partners only event. There has been an email circulated about this and how to put your name down to attend.

Until next month.

Ben VK3NRD.



**Ballarat Amateur Radio Group Inc.
(BARG)**

HAMVENTION

Sunday February 2 2025

At the Ballarat Polo-Crosse Club's
Facility, Ballarat Airport

Display and Sales (setup from 8am on the day)

Trade Table \$20.00 includes one admission,
(Space for 70+ tables, this is a big one!)

General Admission \$ 7.00 (accompanied under 15 free)

STRICTLY 10:00 AM START

Food and drink will be available

Enquiries and up to date details: BARG on the web
www.barg.org.au

The Next BARG General Meeting **Saturday 30th of November 2024**

MEMBERSHIP

BARG Membership

G'day, Hope you're enjoying the newsletter;

The BARG newsletter is shared widely to amongst the Amateur Radio community. Members receive an early edition by email and eagerly await to see what the Newsletter Editor has assembled each month.

If you are not a BARG member why not contact us (barg@barg.org.au) or come along to a general meeting check out the club rooms and meet some of the existing members? Let us show you why membership is a great idea.

You can find information and a membership form at https://www.barg.org.au/?page_id=104 (or perhaps the editor will provide a copy on the other side of this page?)

If you are a member, well you have seen the light, thank you for your continued support.

If you're a past member from "long ago", we'd love to hear from you.

Important: If you're a recent past member, for example you didn't renew by the last day of October this year, then your membership has lapsed. Consider rejoining; Yes, you will have to reapply as a new member by filling in and submitting the same form as above. (Next year don't forget to pay your dues in time)

Now what's the next article in this newsletter.....

Hope to catch you at the next activity...

Colin/VK3NCC

BARG Committee Member

A diplomat is a man who always remembers a woman's birthday but never remembers her age.

The only knowledge that can hurt you is the knowledge you don't have.

Letting the cat out of the bag is a whole lot easier than putting it back in.

BARG inc. OFFICE BEARERS

President	Ben Daniel VK3NRD	Ordinary Member	Tom George VK3DMK
Vice President	Colin Consiglio VK3NCC	Ordinary Member	Ian Fairweather VK3YFD
Secretary	Peter Westgarth VK3APW	Ordinary Member	Doug Ellery VK3DRE
Treasurer	Chris Huggins VK3QY	Ordinary Member	David Martin VK3KQT
Ordinary Member	Craig Cook VK3KG	Ordinary Member	Mal White VK3OAK
Ordinary Member	Paul Black VK3TXR		

The Real Story???

During the BARG net the other week, Robert VK3ARM was explaining how he has done a “spring clean” of his shack, and particular the tangle of antenna coax.

After explaining that he had labeled the coax, a number of operators expressed shock on the apparent organization of the effort and that it is just not done!

When the net was closing Robert mentioned he would not be on the following 6M net due to rearranging of the coaxes.

Well, this is what I assume is the real story.



VHF and Above for November 2024

Another month has now come and gone with little news as to what's been happening on 2m and above. Whilst there have been a few reports on some extended distances due to some enhanced propagation the overall news in this regard is limited.

However, on the 6m band it's another story. I'm advised by Steve VK3ZAZ and John VK3JF that on November 11 there was a significant opening into Europe and Asia which hadn't occurred since 2002 some 22 years ago. A list of some of the countries is shown below.

Japan, Spain, France, Guernsey, Finland, Netherlands Belgium, England, Germany, Ukraine, Serbia, Bosnia, Hungary, Slovenia, Poland and no doubt many others as well.

These contacts were made using FT8 digital mode whereas 22 years ago more than likely the mode would have been CW and in some cases SSB. However, this was a significant opening.

John VK3JF was also receiving a lot of signals from the above areas but his attempt to have a QSO so didn't eventuate due to his antenna and power setup. However, being able to see such signals would give any 6m DX enthusiast a great deal of satisfaction. To be able to QSO with these stations a good antenna and a few hundred watts makes a significant difference.

Bring on the warmer weather for those that have an interest in long range comms on VHF and above.

Don't forget the Spring VHF/UHF Field Day was on the weekend of 23/24 November so if you got into the field and put up a modest antenna, hope you had plenty of contacts.

Cheers, Ian VK3AXH



Veranda Views and Lunar Gratitude: A Moonlit Reflection. musing by Andy, VK3COE

"I'm sitting on the veranda watching the moon rise and cast the silvery light over the paddocks and thanking God for my good luck."

Colin VK3NCC via groups.io to Committee

"For the record I think Bob's onions are worthy of everyone's approval, they are the best ones I have ever seen, carefully nurtured and peeled to perfection...."

Important Day 30th November 2024, Club Activity

Next meeting is Saturday the 30th of November. We are planning to start the day with a working bee to clean up the club.



We'll be pruning many of the trees and shrubs out the front and some out the back.

There's also a pile of wood chips to move from around the back, and a bit of other rubbish to get rid of.

Inside, the kitchen area also needs organising and a general clean up.

We need hedge trimmers and pruning tools. We may need a chainsaw. A pole saw may also be useful.



Please bring gloves!

Start at 9am. Two hours should pretty much knock it over. 11am meeting, and BBQ to finish up.

Drop me an email if you have any questions.
See you there. 73 Malcolm, VK3OAK

Horus 63 – 1st December 2024 – Cross-band Repeater



Contributed by [VK5QI](#)

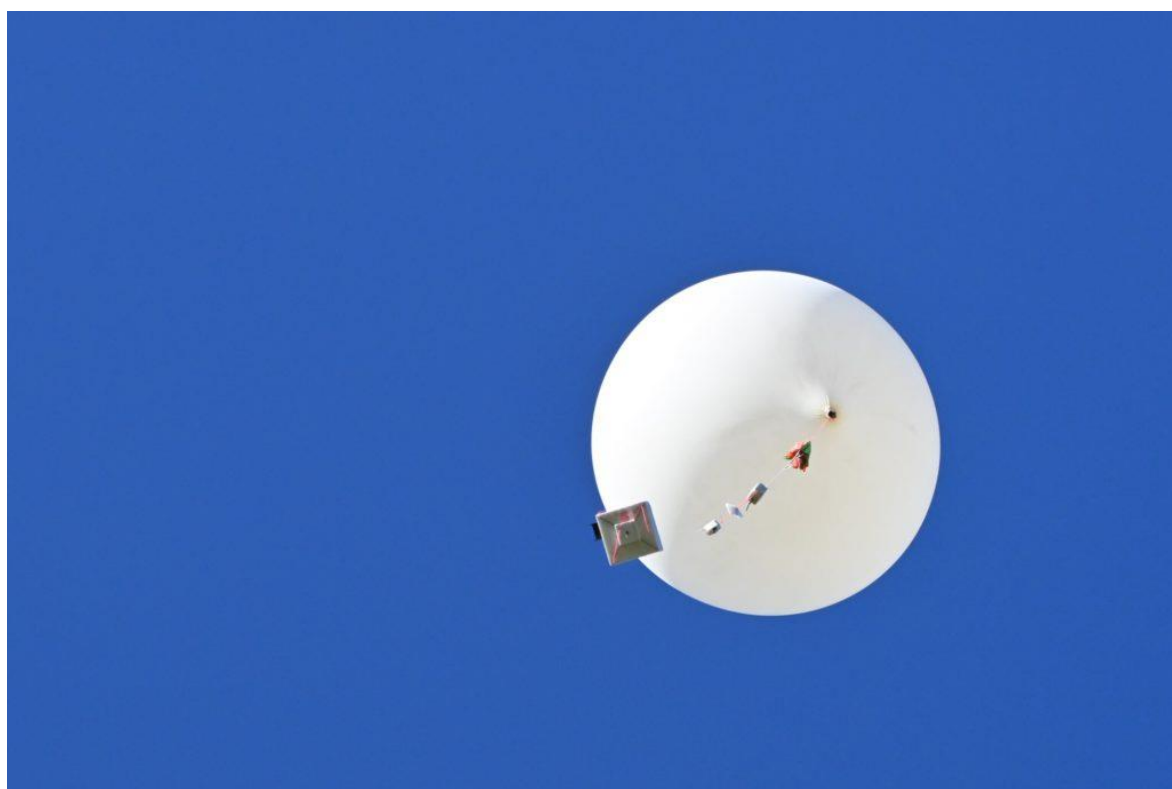
https://www.aretg.org.au/?fbclid=IwY2xjawGvXDBleHRuA2FlbQIxMAABHdtfyLsEQsAMbysbuO4O3vN0WgU8m7uZhmXS2z7fYQBW45SxSWd9WlPing_aem_dYxVV7cinvNoApzhheaqOw

AREG's High-Altitude Ballooning sub-group, Project Horus, is planning their next launch for **Sunday the 1st of December**, with a **planned launch time of 10 AM ACST**.

If we have to scrub due to weather, the backup launch date will be the 8th of December.

TRACKING LINKS

- Flight Tracking via SondeHub-Amateur:
- <https://amateur.sondehub.org/#!mt=Mapnik&mz=9&qm=12h&mc=-33.86622,138.6735>
- Live Wenet Imagery: <https://ssdv.habhub.org/>
- Telemetry Dashboard: [Available here.](#)



This launch is TBD, but will either be from the Auburn Community Oval, or the Mt Barker High School Oval.

This flight will feature a new cross-band repeater payload, enabling amateur radio operators around the state to communicate via the balloon! Along with this will be a newly built Wenet Imagery payload, using a PiCam v3 in autofocus mode.

- **FM Crossband Repeater:** 145.075 MHz Input (91.5 Hz CTCSS), 438.975 MHz output.
- **Wenet Imagery** on 443.5 MHz.
- **Primary Horus Binary telemetry** on 434.200 MHz
- **Backup Horus Binary payload**, on 434.210 MHz
- **TheThingsNetwork tracking payload**, using the [AU915 band-plan](#).

During the flight, all the payloads can be tracked lived on the [SondeHub-Amateur tracker here!](#)

FM Cross-band Repeater Payload

This is the first test flight of a new experimental FM cross band voice repeater based around a Yaesu FT-530 handheld transceiver. The balloon repeater should be heard on:

- **INPUT: 145.075MHz with 91.5Hz CTCSS**
- **OUTPUT: 438.875MHz** – 0.5W into 1/4wave omni

Please note that this repeater is *experimental*, and may have performance issues or even fail completely during the flight!

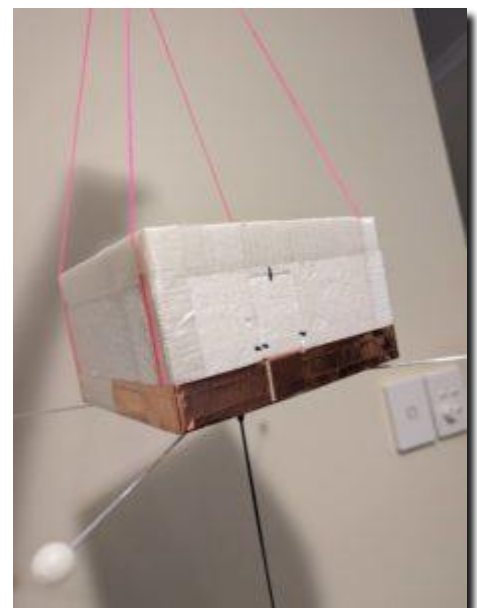
To transmit to the balloon at the maximum range of 800km (once the balloon reaches 100,000ft ++) you should only need approximately 10-20W and an 2-4dB gain antenna. Receiving the balloon at 400km range in a handheld environment should be achievable, but to hear the repeater at the maximum range of 800km you should expect to need a 10dB gain Yagi for a 0.4uV capable receiver and 2dB feeder loss

This setup is much the same as the LEO satellites but without the doppler shift.

PLEASE MAKE SURE YOU CAN HEAR IT BEFORE YOU TRANSMIT!

This repeater will be operated as a controlled net, with the net control callsign VK5ARG – please listen out for net control before calling!

We will be offering QSL cards to stations that make a contact with net control during the flight, so get your stations setup and give it a go!



Primary Telemetry – Horus Binary 434.200 MHz – HORUS-V2

The primary tracking telemetry will be transmitted on **434.200 MHz** using the **Horus Binary 4FSK** data mode. Amateurs in the Adelaide and Central SA region are also encouraged to get involved with the flight through receiving and uploading flight telemetry from our 70cm band tracking beacons. Every piece of telemetry data is valuable to the flight tracking and recovery teams so if you can help join the distributed receiver network to collect that data you will be making an important contribution to the project!

If you try receiving the telemetry from this flight, you'll need a SSB-capable 70cm receiver (or a SDR), and the Horus-GUI telemetry decoder software.

A brief guide on setting this up is available here:

[https://github.com/projecthorus/horusedmodlib/wiki/1.1-Horus-GUI-Reception-Guide-\(Windows-Linux-OSX\)](https://github.com/projecthorus/horusedmodlib/wiki/1.1-Horus-GUI-Reception-Guide-(Windows-Linux-OSX))

Listeners that already have Horus-GUI installed are encouraged to update to the latest version, which is [available at this link](#).

Note that you will need to use a USB 'dial' frequency of **434.199 MHz** for the 4FSK signal to be centred in your receiver passband and hence be decodable.

Backup Telemetry – Horus Binary 434.210 MHz – VK5ARG

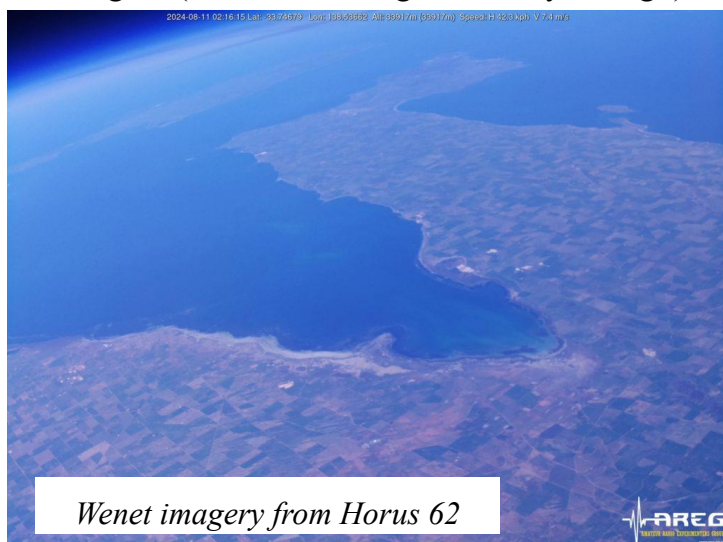
A backup tracking payload will be transmitting on **434.210 MHz** using the **Horus Binary 4FSK** data mode, and can be received in the same way as the primary tracking payload, with information above.

For this payload you will need to use a USB 'dial' frequency of **434.209 MHz**.

Wenet Imagery – 443.500 MHz

Imagery on this flight will be transmitted via the Wenet downlink system, which uses 115kbit/s Frequency-Shift-Keying to send HD snapshots. Reception of the Wenet imagery requires a Linux computer, a RTLSDR, and a 70cm antenna with some gain (a 5-element Yagi is usually enough). This payload will be experimenting with a PiCam v, which we previously flew with only partial success on Horus 59.

This time around many software updates have been written, hopefully allowing the PiCam v3's autofocus to work on a balloon launch. This flight aims to test out these software changes, and gather data to help improve performance on future launches.



A guide on how to get set up to receive the Wenet signal is available here:

[https://github.com/projecthorus/wenet/wiki/Wenet-RX-Instructions-\(Linux-using-Docker\)](https://github.com/projecthorus/wenet/wiki/Wenet-RX-Instructions-(Linux-using-Docker))

Please note the transmit frequency of 443.5 MHz, which may require listeners to re-configure their Wenet setup.

Note: Stations that are already ready to receive Wenet are advised to update to the latest testing version for this flight. See here for instructions:

<https://gist.github.com/darksidelemm/cdc36a90ca96b87d148fdd7d68d5d5fe>

During the flight, the live imagery will be available at this link:

<http://ssdv.habhub.org/>

TheThingsNetwork Payload – 915 MHz LIPD Band

This flight will also fly a LoRaWAN payload built by Liam VK5ALG, relaying positions via [TheThingsNetwork](#) (TTN), a global Internet-of-Things network with hundreds of receiver gateways across Australia. You can find out more [about how TheThingsNetwork works here](#).

The aim of this payload is to test a new antenna and try and beat our previous range records on the 915 MHz band.



*"Ian's living the Happy Days dream at
Food Seduction on Doveton—milkshake in hand
Who needs Arnold's when you've got this spot?"
Ballarat Amateur Radio Group Coffee Morning.*

Every Thursday, 10:00am, 524 Doveton Street North, Ballarat.

10 Metre ARRL CONTEST

Objective: For Amateurs worldwide to exchange QSO information with as many stations as possible on the 10-metre band.

Dates: Second full weekend of December. Starts 0000 UTC Saturday; runs through 2359 UTC Sunday (**December 14-15, 2024**)

[Click Here for the Complete ARRL 10-Meter Contest Rules \(PDF\)](#)

For contest information contact contests@arrl.org or (860) 594-0232

Logs are due within SEVEN (7) days after the event is over. Logs may be submitted either online or via mail, but electronic Cabrillo logs are the preferred method. Electronic logs must be submitted via our web app at contest-log-submission.arrl.org. Paper logs must be postmarked by the log submission deadline.

Logs that have been *submitted electronically* are listed on the [ARRL Logs Received](#) page. Click the contest name to see a list of submitted logs sorted by call sign and club name.

Online Log Submission - Cabrillo formatted logs must be uploaded via our web app at contest-log-submission.arrl.org



Submitting Paper Logs By Mail - Be sure to mail your completed Summary Sheet and Log Sheets postmarked before the log submission deadline.

Paper Entry Forms:

[10metre Contest Summary Sheet](#)

[10metre Contest Log Sheet](#)

Send completed Summary Sheets and logs to:

ARRL - 10metre Contest, 225 Main St, Newington, CT 06111.

If submitting a paper log, it is strongly suggested you use a delivery method that offers a tracking number.

If you wish to convert your log into a Cabrillo formatted log for electronic submission, visit www.b4h.net/cabforms/ and select the event of interest. You can input your log data which will be converted to a Cabrillo formatted log for you (it will generate a log and return it to you), and then you can in turn submit your Cabrillo log online via the web app at contest-log-submission.arrl.org/.

Awards:

Certificates will be awarded in the following categories:

- The highest-scoring single-operator station (in each category) from each ARRL/RAC Section, Mexican State and DXCC country.
- Top multi-operator entries in each ARRL Division, Canada, Mexico and each continent.
- Additional certificates will be awarded as participation warrants.

Printable certificates will be downloadable from contests.arrl.org/certificates.php.



Bush Ballads, Highway Hums, and Beer. Veranda musings by Andy, VK3COE

“Once again, I’m sitting on our veranda listening to the song of the bush. No moon tonight, just the sound of distant trucks on highway. A cold beer next to me and a feeling of contentment. Thank you God!”



Did you ever think about the future of amateur radio? Will the hobby change with time and adapt to modern technology? Will the hobby still exist in 20 years, or will it be obsolete? How many active operators will still be on the air in the next decades? We are talking about the future of amateur radio!

YOTA is a quickly growing group of young radio amateurs from IARU Region 1. It is our goal to get more young people interested in amateur radio and grow the amateur radio community. Every summer around 80 youngsters meet up in a different IARU Region 1 country every year for a week of exchanging ideas and experiences. At the summer camp youngsters learn how to organise youth activities in their own countries, for example presentations at schools, smaller camps for youngsters and more.

All to get more young people fascinated by amateur radio.

During the year youngsters organise a number of sub-regional camps for a smaller number of youngsters, also those who do not have a license yet. There are also young contest teams, special callsigns, and lots of other activities.



The goal of YOTA is to welcome new and young amateur radio operators to our beautiful hobby. We live in a world where communication is being digitalised in a way that we almost can't keep up with. In times like this it's important to convince people about the importance of our hobby. Together with other youngsters all around the world, we can make the difference and give our hobby the future it deserves! YOTA is creating the next generation of amateur radio enthusiasts, bringing new energy into the hobby.

The 3rd and final event for 2024 will be at 10:00 to 21:59 UTC on 29 December on the five classic bands CW and SSB.

The Welfare Net on the VK Repeater Linked System

The **Welfare Net** started in the early days of covid when we were all basically confined to our houses. I came up with an idea to have a net to check in with Amateurs and their families each day via the **VK Repeater Linked System** that covers much of Victoria and Albury / Wodonga.

I approached *Tim VK3TIM* who maintains the most the **VK Repeater Linked System** and sought his approval for the net and he was more than happy for it to go ahead.

The net started life as the **Isolation Net** at 10 AM each day and immediately became a success with many Amateurs seeking regular contact with the outside world during the time of lock down. After about six months I thought the name **Isolation Net** sounded a little depressing and came up with the **Weekday Welfare Net**.

With the **VK Repeater Linked System** having Allstar, IRLP, Echolink and until recently digital access word soon spread throughout the world and we have had check ins from UK, US, Caribbean and our regular **Tom VA5TM** from Hudson Bay, Canada.

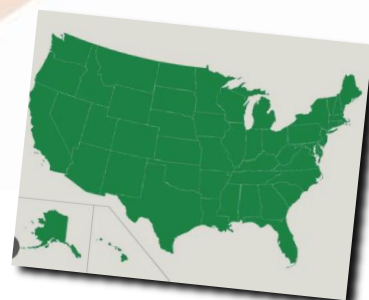


I have had my share of health issues over the last few years and I have been fortunate to have many Amateurs to step up to the plate and run

the **Welfare Net** during times I have not been able to, which I am grateful for. Of recent times the Saturday Welfare Net has also taken place and has proven to be as successful as the Weekday timeslot with many that are not around during the week due to work commitments.



One of the important concepts of the **Welfare Net** is to assist others in need and I have taken a couple of calls for assistance on the **VK Repeater Linked System** and have even called myself on occasions for help too and every time help has been arranged.



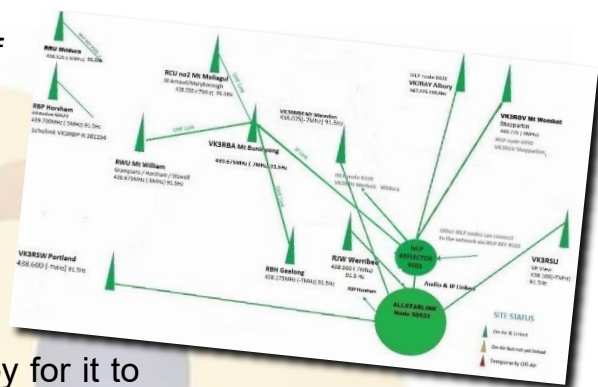
Just recently I have started using an interactive logging system called **ham.live** which gives Amateurs the option to log in via the Internet and includes an online chat service during the net, this is proving to be a success so far and plan to make use of this ongoing.

--The views I present are that of my own and NOT of any organisation I may belong to.

73 de Simon, VK3XEM.

<https://www.ham.live/views/intro>

<https://www.qrz.com/db/VK3RBA>



Robert's Reminiscences

Contributor Robert VK3ARM

Reading Tom's latest effort, (October 2024 BARG Newsletter) it reminded me of my childhood (Yes! I can still remember that!) when we sat around the radio/record playing piece of furniture, playing records or listening to Pick'a'Box, Dad and Dave or other programs that I can't remember on the radio.

The thing was a bit of a monster. Teac cabinet, four legs, twin speakers, a lid in the top that revealed a turntable and TWO AM tuners, yes, two!

3LO (774kHz) and 3AR (621kHz) or whatever the frequencies were in the days of 10kHz spacings, periodically simulcast a music program in stereo. Left channel on 3LO I think and right channel on 3AR.

That was my first ever introduction to stereo music and I can remember being gobsmacked at it. Can't remember what the quality was like. I was too young to be concerned about things like that.

Who can remember this?

Later, in the late 1970s I purchased an AWA AM stereo FM stereo unit for my car. It received AM stereo being transmitted by 3XY and I think 3KZ.

Not sure who else was transmitting in AM stereo but as I was into popular music, I often listened to Hot Hits 3XY. The unit had a WIDE button, and I remember that the quality was quite acceptable, given the 9kHz bandwidth and the separation was excellent.

That was as long as I wasn't travelling under tram lines.

They transmitted using Quadrature Amplitude Modulation Multiplexing.

Check out this article on Wikipedia:

https://en.wikipedia.org/wiki/AM_stereo#External_links

But alas, along came EON-FM followed shortly by FOX-FM so that brought my interest in AM stereo to a close.

Thanks Tom, for that article that revived my long-hidden memories of AM simulcasting and AM stereo.

One gripe though...

Why oh, why do all the ABC Regional FM stations around the country continue to transmit in glorious living Mono?

In Ballarat I believe that their studios are stereo.

That's certainly what I heard one day when visiting Steve Martin in the studio a number of years ago and he had music playing.

When I first moved up here 23 years ago, Big Hill's 107.9 transmitter, relaying from Bendigo at the time was transmitting the 19kHz pilot tone even though what I was hearing was indeed mono.

Perhaps I'm just being pedantic.

Cheers... Robert VK3ARM



December 1st, 2024 Grimeton Station celebrates 100 years

On December 1st, 1924, the VLF transmitter, with call sign “SAQ” at Grimeton Radio Station, was put into commercial operation, with transmissions across the Atlantic ocean, to



the receiving station at Riverhead and the replying transmitter station at Rocky Point, both on Long Island, NY, USA.

On December 1st, 2024, one hundred years later, SAQ will air to commemorate this event. The unique Alexanderson alternator from 1924, with the call sign SAQ, is scheduled for one transmission over the antenna on VLF 17.2 kHz CW.

The Grimeton Radio Station, Varberg parish in southern Sweden, built in 1922-1924, is an exceptionally well-preserved monument to early wireless transatlantic communication.

Located on the Swedish west coast, it lies within the “great circle” – an area without obstacles to radio waves – that is centred on New York, the hub of the transatlantic transmitting system.

The station property consists of the transmitter equipment, including the aerial system with six enormous steel towers each 127 metres high, buildings housing the original Alexanderson transmitter, and short-wave transmitters with their antennae, as well as a residential area with staff housing. The station’s main buildings, built in the neoclassical style, were designed by architect Carl Åkerblad, and the antenna towers – the tallest constructions in Sweden at that time – were designed by structural engineer Professor Henrik Kreüger.



Although the station is no longer in regular use, its equipment is maintained in operating condition. This property is an outstanding illustration of the development of telecommunications. It is unique, being the only surviving example of a major transmitting



station based on pre-electronic technology, and stands as a testimony to the earliest part of a new era of communications.

<https://grimeton.org/en/2024/11/12/saq-to-air-on-dec-1st-100-years-of-communication/>

Live video from Grimeton World Heritage Site. on YouTube;

<https://www.youtube.com/watch?v=VwINhKcSF5o>

Quote of the day from Tate. (VK3DMK's 5-year-old Grandson)

'Just because you're mostly stupid doesn't mean you're fully stupid, Mum!'
Thanks, bud!

- When one door closes and another door opens, you are probably in prison.
- To me, "drink responsibly" means don't spill it.
- Age 60 might be the new 40, but 9:00 pm is the new midnight.
- It's the start of a brand new day, and I'm off like a herd of turtles.
- The older I get, the earlier it gets late.
- When I say, "The other day," I could be referring to any time between yesterday and 15 years ago.

BARG Members Club Dining Events

There are two monthly social events planned.

The ladies' morning coffee is planned for the first Tuesday morning of each month at 10:00am at **Live it Up.**

Greenhill Enterprise Centre, University Drive, Mt Helen

The dining day/night events are held on the 3rd Friday of each month at locations to be announced.

Daytime events will occur 3rd Saturday of each month at midday.

Notices will be sent out as a reminder to get numbers etc prior to booking each dinner.

Cheers. Ian VK3AXH

BARG Coffee Mornings

Come out for a chat, coffee, snack, and solve the world's problems, all in a morning.

Every Thursday Morning at 10:00 am

Food Seduction on Doveton

524 Doveton St Nth

Soldiers Hill

(The old Gove Bike Shop)

YOU MAY HAVE NOTICED OVER THE LAST COUPLE OF NEWSLETTERS, I HAVE USED SOME MEMBERS' PHOTOGRAPHS ON THE FRONT PAGE. I HOPE TO CONTINUE THIS THEME BUT NEED HELP FROM READERS TO SUPPLY IMAGES EVEN REMOTELY CONNECTED WITH AMATEUR RADIO/ELECTRONICS.

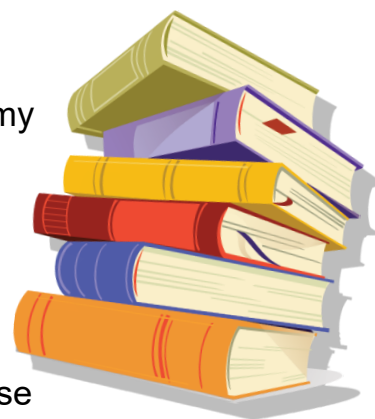
A word from the librarian to all members.

Well, the year is nearly over and it seems only like last minute we just crept through the new year and started reading the January edition. I have been having some problems with my computer and missed a couple of magazine editions so now we have a couple of magazines to be reviewed and fill up your reading time.

Reminder to all members that after the review is done for the magazine the copy will appear in the club library sorted into its year box. You may read the mag in the club rooms/library or borrow it for one month [between successive meetings] but please enter all details in the loan book that sits on the stand in the library.

On return you should sign the book with date of return and place the magazine in its appropriate box BUT PLEASE rehome it chronologically by the month. ie Jan, Feb, Mar etc as it makes it easy for others to pick out which one they want. It also makes the job of the librarian much easier when sorting and checking if all mags are present or can be seen from the loan book whatever has been borrowed from the sequence.

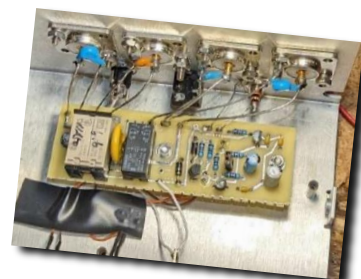
Club Librarian Craig VK3KG



Magazine Reviews

QST Magazine Review SEPTEMBER 2024

- P4 Main index
- P9 Second Century. By NA2AA ARRL CEO. Dewey Defeats Truman! About the Logbook of The World and its security along with the support by the ARRL to continue this logbook service to members.
- P13 Member Spotlight. Geof Mendenhall, W8GNM.
- P20 Up Front. Making 3-500Z tube lamps from damaged stock. Dad Joke. IOTA Beverages A new drink for Islands on the Air participants. Where Elmers Hang Out, Trent Dowler, KG5DTI, found a place for Elmers while traveling Highway 86 across Texas.
- P34 Correspondence. Getting started, FT8, QST and morse.
- P30 External QSK T/R Switch for HF Amplifiers Using an Inexpensive Power Relay. Phil Salas, AD5X. A low-cost external QSK switch that will work with any amplifier. Power relay module for QSK (break-in) operation. A very simple discrete component project.
- P35 Coaxial Cables with Foam Dielectric. José Luis Giordano, CA4GIO. A detailed look at the physical and electrical reasons that foam is used in low-loss coaxial cables. Looks at losses and dielectric types and comparisons.
- P36 New Products. Test Equipment Calibrator. A PCB providing calibrated, Volts, Amps, Frequency, Capacitance and Resistance in basic standard values so you can check your own DMM.



P37 Certificate of Code Proficiency Recipients. ARRL recognizes merit and progress in Morse code proficiency on the part of the following individuals, who have achieved proficiency at the following rates, in words per minute.

P38 Product Review, Kenwood TH-D75A Tri-Band FM/Digital Transceiver. Steve Ford, WB8IMY. A Handheld with the capability to transmit on three VHF/UHF bands — 2 meters, 1.25 meters, and 70 centimetres — at a maximum output of 5 W. And on each band, you can choose to operate analog FM or digital. Your digital options include D-STAR, packet radio and GPS (including the Automatic Packet Reporting System [APRS]). It has HF reception capability and remote control via an application.



P43 DX Engineering NOISELOOP Portable Flag Antenna Kit and Portable Receive Preamplifier-Attenuator. Reviewed by Stephen Anderson, W1EMI. This review consists of two DX Engineering products that work together: the DX Engineering NOISELOOP Portable Receive Flag Antenna Kit (DXE-NOISELOOP) and the DX Engineering Portable Receive Preamplifier-Attenuator (DXE-NL-PRE-ATT-1).



P46 Elk Antennas 2M/440L5 Dual-Band Portable Log-Periodic Antenna. Reviewed by John Leonardelli, VE3IPS. The log-periodic design offers wide frequency coverage from 144 to 470MHz, accommodating both 2 meters and 70 centimetres in a compact, two-foot-long package. This feature simplifies most operating environments by removing the need for a duplexer, allowing the use of a single coaxial cable, and enabling operation at high power levels. Whether you are bouncing signals through satellites or working simplex two or three counties away, this antenna is a reliable choice for ISS and satellite operations.

P50 Ask Dave Casler, KEØOG. Inside SWR and Static Buildup, why you get buildup and how to counteract it with some simple circuitry.

P52 Hints & Hacks. Sharing Audio the Easy Way; Gutters as Stealth Antennas; A Wood Base for Prototyping.

P54 Flash Drills. Mike Pulley, WB4ZKA. Create opportunities for your group to practice skills and prepare for an emergency situation. Using Flash practice events to hone and debug any emergency situation communications procedures.



P57 New Products Radio Separation Kit SwapMyRigs (SMR) now has a radio separation system in kit form! The kit lets you swap radios without ever having to install new cables. By routing all the conductors through a common VGA cable, any radio with industry-standard RJ connectors can be installed or replaced without using manufacturers' proprietary, multi-cable separation systems. No soldering is required; all circuit boards are fully populated and soldered. Assembly requires only common tools.

P58 W/VE Island QSO Party: A Kayak Rove Matthew Brown, K2EAG. Three experienced POTA operators teamed up to activate five islands in a Pennsylvania lake that are accessible only by water.

P61 Conducting a Foxhunt at a Scouting Festival. John Abbott, K6PFN. A Scouting volunteer was asked to showcase amateur radio at a community event; here's how he delivered. Planned for over 100 participants, multiple foxes on the same frequency, cycling to provide a dynamic fox hunt.



P63 2024 Simulated Emergency Test. The annual ARRL SET will be October 5 – 6, 2024.

Steve Ewald, WV1X, ARRL Field Organization Supervisor

P64 The 2024 QST Antenna Design Competition.

P65 2024 ARRL International DX Phone Contest Results

P70 Happenings. Hurricane Beryl Aftermath and Update. 70 September 2024. Sierra Harrop, W5DX.

P73 Contest Corral September 2024.

P74 Public Service Meet KPARN Volunteer Coordinator. Duane Mariotti, WB9RER.

P76 Club Station Fostering Club Partnerships with Dual Field Days. Mike Walters, W8ZY.

P78 Ham Media Playlist. Portable Antenna Projects. Steve Goodgame, K5ATA.

P80 How's DX? 6O — Somalia. Bernie McClenny, W3UR.

P82 The World Above 50MHz. E51EME South Cook Islands. Jon Jones, NØJK.



QST Magazine Review OCTOBER 2024

P9 Building a Future for Amateur Radio. David the CEO of ARRL looks at the changes that have occurred since 2001, Reimbursing the one-time fee of \$35 fee. Free Associate member status in 2024 but more needs to be done in future. Later wants to develop a coding function for

P13 Member Jab Heise K4QD, Served in the USAF as communications technician serving in Germany and France followed by service at the Pentagon in Defence Agency and while there, he picked up an Advanced licence. After leaving the Airforce he worked for Harris Corporation where he employed in information technology for twenty years. Active in scouting involving his son and grandsons to Eagle scout level. Amateur radio has also been involved in his pre and post-retirement activities with DXing featuring high in list. POTA and WWFF are also logged activities now.



P24 Letters covering.: MFJ retired. Voluntary Examiners giving feedback, Others on retirement.

P30 Digital Test Equipment. The ins and outs, and the architecture of digital test equipment.

P34 The AmpKeyer. Switch almost any amplifier with almost any radio.



P38 REVIEW: Precise RF DPM6000a swr/power meter. This is a Dual channel device that handles 100W and able to go up to 1500W from 1.8 – 54 MHz. Optional accessories allow the unit to read to 450 MHz [see separate tables] Cost is USD975, see www.preciserf.com



- P43 REVIEW. Precise RF TDR-Cable Radar Pro Pulse Generator. The author explains his testing procedure and shows answers in the article. Price USD775.
- P45 Review. Kits for SWR and Wattmeter Kits. The GM-102 kit is supplied by WA4MCM and requires a 12V supply and reads power up to 2kW while covering 1.8 to 50 MHz. Display is a coloured ESP32-S3.



- P50 Ask Dave. Today he fields question concerning grounding issues in bedrock ground, coaxial cable and CW with Keys, Paddles and Keyers.

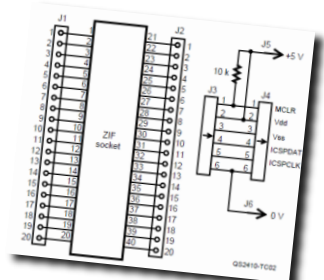
Also see www.youtube.com/davecasler or his weekly livestream on a Thursday at 6.45 to 8.15PM Mountain time. US of course.

- P52 Microwavelengths. Looks at Transverters and verifying performances. Following up on his previous three editions in this column covering the Basic transverter, the Local oscillator and the testing and troubleshooting. He now looks at using the gear to make your first contact. However, is it performing at peak performance level? Here is the explanation about the receiving capability of a system. Things like NF [Noise figure] of the receiver, to point the antenna [a dish on 10GHz in this case] and observe the noise signal when pointing at the SUN, then the cold SPACE and then pointing at the GROUND. Each of these objects invoke a signal level from the receiver which is used to calculate the Noise Figure.



SEE THE JULY 2019 QST MICROWAVELENGTHS. Article discusses the app by Mario Natalli 10NAA called **Total Power** Requiring only a Laptop and a low-cost RTL-SDR dongle which connects to the transceivers IF output to detect the noise and display a plot of the noise level. See Fig TWO of this article.

- P54 Tech Correspondence covers a fixture for programming the PIC processors with the PICkit 3 Programmer/Debugger. See www.microchip.com Because of age and obsolescence this project allows the addition of the ZIF socket on a random piece of PCB and leaving the pins sticking out from the socket which allows the user to use push on wire pins to suit individual configurations.



- P56 Visit to the RSGB club station GB3RS at Bletchley park by ARRL Ops Officer Harold WJ1B and a brief history of both organizations and operation of the station.



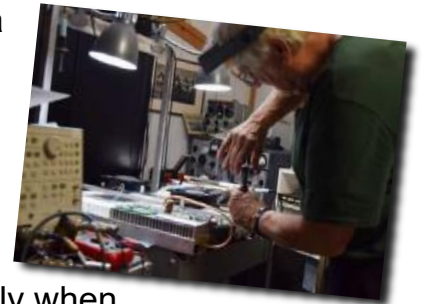
- P58. What to expect from the Solar Cycle 25 Surge. Describes effects on all bands from 160M to 6m WWW.nasa.gov/solar-cycle-progression-and-forecast look at site before 10th of each month for updates. Final section looks at the 6m band and lists recommended heights for a horizontal dipole on each band 10-80M. Lookup more on sunspots at www.sidc.be/SILSO/eisnplot



P61 The 222Mhz band Amplifier project. Unknown to Australian amateurs the US has been authorised since 1934 [Region 2] but unfortunately its under used by conventional SSB/AM/CW operators and FM , like others has proliferated but not in serious distance operations. Basically, the lack of commercial gear as surplus has hindered operations for 222-225. In 1970 the FCC considered turning the band over to CB. In 1988 they did take the bottom 2MHz for Commercial and government Land Mobile services. As result the building and converting gear seems to have retarded the thought of loosing all the band next and its retarded activity. As this band is capable of weak signal or longer-range comms (1,000miles using SSB or CW)



When a local TV station transited to digital there were a number of pallets of the Larcan 1500W solid state amplifiers available. Dave K1WHS saw the potential and along with others set to designing and realigning the units to the 222MHz. The requirements being only 35W drive and a supply of 50V (with more than sufficient grunt capacity] and although they have heatsinks that are 15 x 21 inches Dave also blows them with a couple of fans only when transmitting. To encourage more band use i.e. WAS and EME as well as weak signal these amps are being given to operators who can show interest in activating a poorer location and encourage others to get going. With this power out an antenna of only 5 wavelength size is usable.



Already 222MHz band is looking good.

P64 YOTQ Camp is more than just Ham Radio. This article written by TWO young amateurs who attended last year's camp and look at some of their activities.

The ARISS program and talking to people on the ISS, POTA meet and renew friendships with other young amateurs from other countries etc.

Visit www.youthontheair.com



P68 The QST 2024 Antenna design competition. Closes 16 Dec and covers three categories 160,LF and VLF. 2.80 through 10M. 3. 6M and up. Guidelines given on page and entry to QST 225 Main St, Newington, CT 06111 or gst@arrl.org qnd not exceed 6 Mbytes or must se3nd another email.

P70 Amateur radio partakes in World's largest Naval exercise.

RIMPAC2024. June 27 to Aug 1. All over now but the TV news has given a lot of coverage for pacific countries.

P73 Celebrating the Americas cup races on the air. The NZARL was asked to supply a radio station for the 37th cup held this year in SPAIN, As result ZL6AMCUP is activated until 30 November 2024. No bands given for operations.



P74 Wireless Institute of Australia Directors meet with ARRL at Dayton Hamvention. Lee VK3GK President and Chris VK3FY discussed a range of issues as membership issues and youth recruitment. Other Australian calls noted in attendance were VK's 5CP Chris, 2TLQ Adrian, 3MV Peter, 2ASD Phil, 6SJ Steve, 3FE Nik and 1KAZ Kaz.



P75 Public Service. The Age of Winlink. The Oregon Disaster team ran a two-day exercise using Winlink which allows Email, GPS and Bulletins along with admin and of course radio operations. This exercise involved aircraft tracking, Wx reports.

Winlink can offer a range of forms or templates. The International Health services also participate with observers as they use operators when they deploy to emergencies in countries without 4radio or telephone services in the area. An HF link using Winlink .
www.emcomm-training.com

There is a Winlink site at www.winlink.org if interested.

P82 Ham Media Playlist. Of interest to many amateurs too scared to put an antenna up in the air at home. The Stealth Antenna concept has been used in wartime to use without a neighbour knowing or keeping one's head down from the enemy during conflict.

Look at this YouTube. HOA Ham
www.youtube.com/@HOAHamRadio There are a host of ideas already used and developed by amateurs living within restricted units that will not allow towers and multiple wire antennas



P84 How's DX. CB0ZA, CB0ZEW, and CB0ZW on the Robinson Crusoe Island in the Juan Fernandez archipelago. It was in Feb 2024 that a crew of six participated although a much larger group was going to participate. Unfortunately, a principal, Marco CE1EW had a fatal heart attack, and the expedition nearly cancelled out. However a smaller group carried on See results www.qrz.com/db/cb0za

While on the island in spare time they repaired local fishermen's repeater, police radio supplied a printer to local woman's group and donated a power supply to police radio. Well done. Dedicated to Marco CE1EW (SK)

P86 World above 50MHz. Solar cycle 25 now as high as cycle 23.
October long path opening on 6M. 19 July. Puerto Rico to Alaska.

P88 Special Events. 5 Sept – 31 Oct.

P95 Looking Back. QST November 1974.

P98 Classic Radio. The National NC-270 Cosmic Blue Receiver. From the 1960's to 1964 and cost USD249 which equates now to \$2652 today. Ten valves (peanut type) and covered traditional pre WARC bands 6 thru to 80M. Modes were AM/CW/SSB as common in that time. Two Ifs on 2215kHz and second IF a sharp 230kHz which gave a good image rejection. 100Kc inbuilt calibration crystal.

P100 100, 50 and 25 Years ago , Their index



QST Magazine Review NOVEMBER 2024.

P9 The CEO reviews the future of the DXCC and discusses the changing nature of amateur radio and the new country concept doesn't have the same degree of interest it did fifty years ago.

P13 Members. Rachel KO4HLC started her amateur journey during the COVID outbreak and has developed her interest across most areas of the hobby. As a passionate teacher she has embraced most facets of technology and has been part of the space station amateur radio support. Married to a military man she moves about quite a bit on postings but still stays active.



P20 Up Front. Philately occurs within our movement when we send QSL cards to a station we have just had a contact with. Unfortunately, many do not QSL these days or they only use the paper mail card sending and stamps are no longer used and collectors miss out. It is understood that with the cost of stamps having risen so much this is a large factor.



P24 Letters Cover subjects such as "retiring the Elmer concept, helping hand to those who maybe lost their way in the hobby and need a gentle push in correct way. And also an idea to use drones for measuring field strength around a beam.

P30 Full power inexpensive Antenna Relay.

P32 Build Antenna Remote-Control Tuning System. With an inbuilt Bias Tee it has been tested out to 1.5kW on HF RF power and it includes a 2.4GHz Internet of Things control port and a 2.5A DC power port.



P36 Review: QRP Labs QMX 5W QRP Transceiver.

www.groups.io/g/RPLabs

Available as a kit from the manufacturer for \$102 from the UK. www.qrp-labs

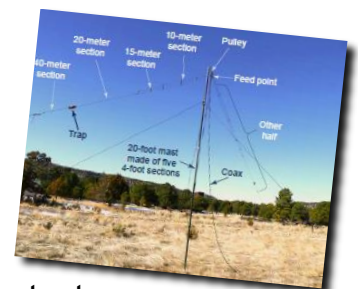
P45 Review. LDG AAF5 Analogue Audio Filter. Measuring 6x3.5x1.5 inches enquiries to www.ldgelectronics.com

P48 Ask Dave where your questions are answered. Viz, Interfacing newer rig with an older amplifier.

A compromised shortened Attic antenna.

Turning a single band antenna into a Multiband antenna. .

P50 Hints and Hacks. Pulley alternative, Straw Solutions: Rope pulleys that won't jam, A no holes mobile mount. Adding length to a short VHF antenna.



P52 Healthy Contesting Habits; Look after your self when out to contest and win.

- P54 POTA mini-Dxpedition. Isle Royal NP.
- P56 Summits on the Air in the Navajo Nation. An interesting read and Charlie NJ7V discuss the story of the WW2 Navajo Code Talkers I remember reading about these men when in the Pacific war and speaking in their own language had the Japanese unable to understand and decode their traffic. Herb N7HG is the son of one of these WW2 communicators.
- P58 What Solar Eclipses have to tell us. Citizen scientists have access to a host of sites and the capability discovering new things about the weather. www.doi.org/10.10.29/2018GL077324 and see www.hamsci.org/grape and also www.hamsci.org/MW-recordings
- P61 75 Years of the National Traffic System. Derived from 1948, the NTS system of message relay by amateur radio has flourished around the USA and in the following 75 years, engulfing new technologies as well as continuing to use older more established methods.
- P65 Contest Calendar November 2024 to December 2025.
- P67 Unlocking the World of Competitive Ham Radio. Looks at the contest side of amateur radio and the Technician Class of license, the bands and equipment.
- P70 Analysing Contest Results for Improved Scores. How to approach a contest, looking at the contest rules and logging software.
- P72 Tips for Successful QRP Contesting. Strategies, equipment and fun of contesting with limited power.
- P82 The 10-Meter Project: Helping Technicians Enjoy HF. Getting the most out of 10M from a Technician point of view.
- P86 How's DX? The DX Marathon Program. History and a Q & A about the program and how to participate. www.dxmarathon.com/year-of-dx.



Silicon Chip Review NOVEMBER 2024

- P2 Editorial: Simple circuits and hydraulic analogy.
- P14 Nikola Tesla 1856 – 1934, the original “mad scientist”. David VK3DSM. Looks at the inventions and ideas along with the important AC concepts, ideas about turbines, wireless transmission, fluid valve, electric car, VTOL aircraft. Discusses some of his mistakes and misconceptions.
- P24 Variable Speed Drive Mk II, for induction motors. Part 1. A revised version is lighter, better cooled and more efficient, 1% to 100% speed range with built in EMI/RFI filtering. Rated at up to 1.5kW, this article included how it works and the programming strategy.
- P42 Precision Electronics Part 1. Introduction. Looks at the concept of “Precision” and how you define and measure it in an electronics world. This first part looks at components’ many variable parameters that can influence accuracy of performance.
- P48 Surf Sound Simulator. Using standard op-amps, BJTs the operation of a sound simulator starting with a white noise generator and some modulation and filtering effects to give you a sound of the surf.

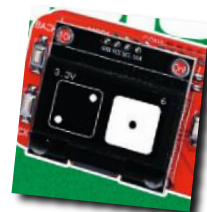


P59 Mini Projects #014, Tim Blythman. Analog Pace Clock and Stopwatch. A mechanical timer-display driven by an Arduino Leonardo commonly seen at swimming pools so swimmers can check their lap times. The first clock of this type was an Australian invention in Sydney.



P63 Mini Projects #013, Tim Blythman. Digital Spirit Level. Using a digital accelerometer a bright LED array and a Leonard controller, 1% resolution in gradient or tilt mode.

P66 FlexDice. A versatile electronic dice that does more than the usual six sided device. Using a small 128 x 64 OLED display, it can operate in dice(1 to 6), numeric dice (2 to 100), random card pick (with 0 -6 Jokers) and a coin toss mode. Powered by a coin cell.



P76 Circuit Notebook. Tunnel time uses 555 instead of a microcontroller, Using a common IC to generate a negative rail, Model train rail blockage detector.

P78 0.91-inch Monochrome OLED screen. Shows how a 128 x 32 pixel I2C interfaced display can be programmed



P82 3D Printer Filament Drying Chamber. Part 2. To have consistent 3D printing results, the filament works best if it is not carrying any moisture. This part looks at construction of the heater and enclosure to prepare your filament.

P90 Maxwell's Equations. Look at the equations and contributions of James Clerk Maxwell and the equations which influenced other experimenters in those times and their accomplishments.



P96 Serviceman's Log. Broken Laptops, danger of high-impedance measurements, valve tester repair, wall clock.

P103 Vintage Radio. Revisiting the Zenith Royal 500 AM Transistor Radio. Produced in different models, this is a pocket sized radio produced from 1955, a superhet design, usually 6 BJTs, the transistors being NPN and PNP in mixes or pure PNP or NPN models with 4 AA batteries.



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Errata:

In the October Edition of the newsletter this image was attributed to VK3FS, this was an error and the equipment is part of Peter's, VK3APW, microwave gear.

Tom VK3DMK BARG Newsletter Editor



VK3FS 2019 Spring VHF



Ballarat Amateur Radio Group Inc
Registration Number A0006953T
ABN 44 247 200 143
Application for Club Membership

This completed document should be emailed to the Secretary at BARG@BARG.ORG.AU, or brought along to a face to face meeting.

Surname: _____ **Given Names:** _____

Callsign: _____

Are you a financial member of WIA?: Yes No

Partner's Name: _____

Residential Address: _____

Postcode: _____

PostalAddress: _____
(If different to above) **Postcode:** _____

Telephone;
(Work) _____ (Home) _____ (Mobile) _____

EmailAddress _____

Unless otherwise requested, Newsletters and Club information will be sent to your email address. If the Club decides to publish a Club Directory, are you willing to have the above information included? Please indicate: **Yes No**

By applying for membership I indicate my support of the purposes of the Association and agree to comply with the Association rules in effect.

Applicant's Signature: _____ **Date:** _____

Proposed By: _____ **Callsign:** _____ **Date:** _____

Seconded By: _____ **Callsign:** _____ **Date:** _____

--ooOOoo--

Presented to Committee: _____ **Decision:** Accept / Reject

Fee Paid: \$ _____ **Date:** _____ **Receipt No(if applicable:)** _____

Entered into Membership Register: _____ **Secretary:** _____